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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,908

06/14/2005

Jurgen Osterlanger

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20311 7590 04/08/2008

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EXAMINER

WAITS, ALAN B

ART UNIT

PAPER NUMBER

3682

MAIL DATE

DELIVERY MODE

04/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,908	Applicant(s) OSTERLANGER, JURGEN	
	Examiner ALAN B. WAITS	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 15 January 2008. These drawings are acceptable.

Claim Objections

2. Claim 1 is objected to because of the following informalities: the phrase "a rolling mounting means for rotatable mounting" perhaps should read --a rolling mounting means for rotatably mounting--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tatewaki et al US 2002/0148672.

Tatewaki discloses a similar device comprising:

Re clm 1:

- A rolling-body screw mechanism (B, fig 5)
- A housing divided into two housing parts (233 and 231, respectively, fig 5) transversely to the axis of rotation
- A hollow rotor (102, fig 2) mounted rotatably on a spindle nut (103, fig 2)
- A threaded spindle (101b, fig 2)

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- The spindle nut being drive-connected to the rotor (103 is connected to 102, fig 2)
- A rolling mounting means (113, fig 2) provided on only one housing part (233, fig 5) of the housing
- The rolling mounting means is formed by a multi-row angular ball bearing ([0080], last sentence)
- An outer ring (outside of 113, fig 2) seated in a housing bore (slot that 113 fits into 233, fig 5) of the one housing part
- Ball grooves (groove on inner ring where ball 108 sits, fig 2) of the angular ball bearing (113, fig 2) are formed on an outer circumference of the spindle nut (103, fig 2)

Re clm 4:

- The rolling mounting means is arranged axially within a construction space occupied by the spindle nut (rolling mounting means 113 is in the same construction space as nut 103, fig 2)

Re clm 5:

- The rotor (102, fig 2) is arranged axially within a construction space (region that the nut occupies, fig 2) occupied by the spindle nut (103, fig 2)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tatewaki et al US 2002/0148672 as applied to claims 1 and 4 above, and further in view of R. E. Osborne USP 2964967.

Tatewaki discloses all the claimed subject matter as described above.

Re clm 6 and 7:

Although Tatewaki discloses the rolling-body screw mechanism is a ball screw mechanism (103, fig 2) with a deflection ([0081]) for balls of the ball screw mechanism

He does not explicitly disclose the rolling-body screw mechanism is a ball screw mechanism with an outer deflection for balls of the ball screw mechanism.

Osborne teaches the rolling-body screw mechanism (16, fig 1) is a ball screw mechanism with an outer deflection (20, fig 1) for balls (22, fig 1) of the ball screw mechanism for the purpose of providing for an improved means for circulating the balls in the ball nut.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Tatewaki and provide the rolling-body screw mechanism is a ball screw mechanism with an outer deflection for balls of the ball screw mechanism, as taught by Osborne, for the purpose of providing for an improved means for circulating the balls in the ball nut.

Tatewaki in view of Osborne further disclose:

Re clm 7:

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- The spindle nut (103, fig 2; Tatewaki) is provided, in a region radially between the threaded spindle (101b, fig 2; Tatewaki) and the rolling mounting means (113, fig 2; Tatewaki)
- A return bore (the way tube 20 connects to grooves 18, fig 1; Osborne) for balls of the ball screw mechanism

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tatewaki et al US 2002/0148672 as applied to claim 1 above, and further in view of Bugosh US 2003/0192734.

Tatewaki discloses all the claimed subject matter as described above.

Tatewaki does not disclose:

- The rotor (102, fig 2) being provided with a driving surface for the drive belts on the circumference of the rotor

Bugosh teaches:

- The rotor (82, fig 2) being provided with a driving surface (outside of 82, fig 2) for the drive belts (164, fig 2) on the circumference of the rotor

for the purpose of providing an improved means of driving the rotor.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Tatewaki have the rotor being provided with a driving surface for the drive belts on the circumference of the rotor for the purpose of providing an improved means of driving the rotor.

Response to Arguments

8. Applicant's arguments with respect to claim 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kuze et al USP 6644431 discloses a hollow rotor and Yost et al. USP 6644432 discloses a similar device that is belt driven .

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN B. WAITS whose telephone number is (571)270-

3664. The examiner can normally be reached on Monday through Friday 7:30 am to 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alan B Waits/
Examiner, Art Unit 3682

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3682